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# homemakers' chat

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U. S. DEPARTMENT  
OF AGRICULTURE

★ JUL 30 1942 ★

U.S. Department of Agriculture Wednesday, August 5, 1942

SUBJECT: "FABRICS MOTHER NEVER KNEW." Information from home economists of the U. S. Department of Agriculture.

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War brings so many changes -- even in familiar fabrics. Wartime shortages of certain materials for both military and civilian use have led to many textile investigations with some surprising results. As you know the Army and Navy need great quantities of wool for uniforms. That makes wool scarce for civilian use. The Army and Navy also need certain types of cotton for tents, sand bags, tarpaulins and other uses. And silk has been out for some time. So we must make the fibers we do have go as far as possible, either by improving them so they'll wear well, or by mixing them with other fibers to stretch the supply, or by finding substitutes.

Laboratory research has solved some of these problems. Scientists have found out a number of ways to improve natural fibers. Some processes actually change the fibers. Others finish the fabrics in ways that make them more useful or durable. The home economists of the Department of Agriculture have done considerable textile research, and private industry has modified some fibres and developed substitutes for others. Also the clothing specialists of the Department have experimented with designs for work clothing, using these new or substitute fibers.

Let's run down the list of new developments in fibres. First, WOOL. Chemists can now modify wool to make it strongly resistant to moths, bacteria, and molds; to shrinkage during laundering; to certain chemicals; and to aging, as by sunlight. Thus thru research the natural wool fiber has been improved.

Second, COTTON. In many products cotton can substitute directly for jute, hemp, wool and even silk, but for others it must be chemically altered to improve its strength, elasticity, and crease resistance.



Third, RAYON. Rayon research has concentrated for a long time on improving the strength of the fibers. But now textile chemists are trying to make rayon more resilient or springy. One process gives it a permanent crimp or waviness so that it resembles wool and can replace wool in making clothing. We also have all-rayon rugs and all-rayon blankets that look and feel very much like wool. "Spun rayon" is made into soft challies, heavy suitings, crepe fabrics, plushes and coatings. Manufacturers can make rayon resemble cotton and linen as well as wool.

Rayon stockings are coming to the fore. Women still want hosiery that looks, and feels and wears like silk. Manufacturers are now making rayon yarn that will knit into sheer, elastic, dull-surfaced, strong, hose, that resist snags and rubs.

So much for the fabrics we already have, and the ways they can be improved. Textile chemists have gone further. They've invented some new fibers, and made fabrics from them that may turn out to <sup>be</sup> more suited to our needs than those made from natural fibers. These are fabrics "Mother never knew" because they didn't exist, and even now some of the new mixtures have no names.

"Nylon" is a very important new fiber, a truly synthetic textile. We are now having to substitute other fibers for nylon, because of its value for parachute fabric and other military uses. In our brief acquaintance with nylon, it has become so popular there is every reason to suppose civilians will have it again later on.

"Vinyon" is the name of a synthetic material used for shoe uppers, gloves, and chemically resistant work clothing. "Saran" is another new fiber, - a plastic that can be woven like cloth for belts, handbags, shoes and upholstery. Saran won't burn and has unlimited color varieties.

Natural proteins are also making textile fibers these days. One such fiber is made of the casein of milk. It combines with wool, mohair, or rayon. Casein fiber also goes into fur-felt and wool-felt hats, -- into blankets, suitings, and automobile upholstery.





The soybean plant may soon become another new source of textile fibers.

Chemists who have been experimenting with soybean fabric find that it can be produced at half the cost of sheep's wool, and that it has a warm, soft feel and a high degree of resiliency or springiness. Soybean fabrics aren't on the market yet, but soon may be. Peanuts, corn, fish protein, and the bark of the redwood tree. Even glass has been used as a textile fiber, but it is brittle and easily damaged by rubbing.

In recent years, you know, there has been much research on chemical finishes for textiles to give them special properties. For instance, some finishes make fabrics crease-resistant; others make them repellent to water, spots, and perspiration; or moth resistant; or make them resist fire. Other treatments protect cotton fabrics from mildewing and rotting.

Starching is a job that has almost disappeared since the new cotton fabrics with a starchless finish have come in because they stay crisp, smooth and free from fuzziness, even after laundering. Other new finishes make cotton look like linen, or rayon look like wool. Fabrics are often made from two or more different fibers. Nowadays when you can't tell by looking at a fabric what fibers it contains, you'll be wise to read labels and insist on information about the wearing quality of the fabrics bought.

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